

The Second Chinese Workshop Focuses on Applications of Spallation Neutron Sources

Close to 180 scientists and graduate students from 32 universities and research institutes in China attended the Second Workshop on Applications of Spallation Neutron Sources in Beijing, from July 27–29, 2005. The event was organized/sponsored by the Institute of Physics (IoP) of the Chinese Academy of Sciences (CAS) and the China Center of Advanced Science and Technology (CCAST).

Jie Zhang, the project leader of the Beijing Spallation Neutron Source (previously the Chinese Spallation Neutron Sources) welcomed attendees with the good news of the imminent official approval of the project by the government, and updated everyone on the recent progress made, including the process of selecting the BSNS site in a northern suburb of Beijing. This represents a significant advancement made toward the realization of a 1.420M Chinese Yuan or \$177M project to be completed around 2011, especially since the first workshop was held (see *Neutron News* 16(1) 2005).

The BSNS consists of a 70 MeV linac and 1.6 GeV/25 Hz synchrotron that produce a proton current of about 62 μ A (100 KW), a tungsten target surrounded with liquid H_2 , CH_4 and

H_2O moderators, and 18 beamlines. This ISIS-like machine will be China's first spallation neutron source, committed to serving users of basic research in science and engineering. The initial instrument suite includes two powder diffractometers, a small-angle diffractometer, a reflectometer and a chopper spectrometer. It is hoped that users will participate to various extents in designing and building scattering instruments and ancillary equipment, especially for those beamlines following the installation of the first five instruments.

Up until now, neutron scattering capability in China has been limited to one meager reactor. But in two or three years, the start-up of a new reactor in Beijing, the 60-MW China Advanced Research Reactor (CARR), which is also a user facility, will enhance the abilities of research and the capacity for users considerably. Therefore, in a larger scope, this annual workshop series signifies the endeavor of building a neutron user community at the grassroots level, so as to ensure the healthy growth and continual expansion of reactor and pulsed-source utilization. Several

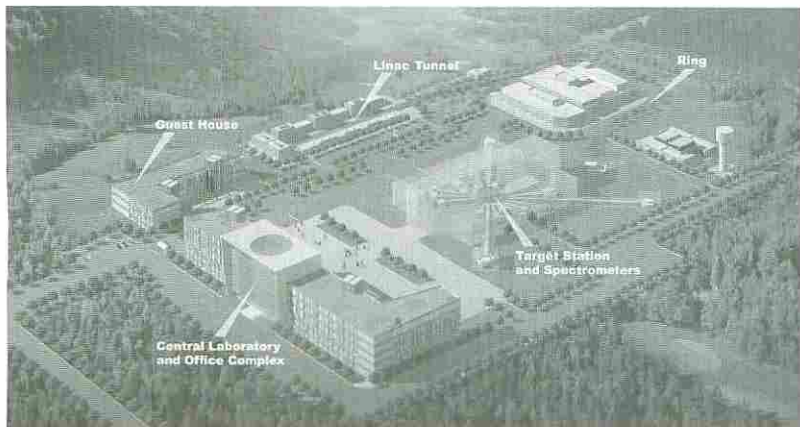
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An artist's representation of the BSNS site north of Beijing.

talks illustrated the impact of neutron studies on research frontiers in biology, energy and the environment, condensed matter physics/chemistry, materials science, and engineering. In addition, speakers also explained and encouraged users to take full advantage of the complementarity between reactor- and pulsed-source-based instruments and techniques.

In addition to discussions among speakers and the audience during the sessions, a more direct exchange between users/enthusiasts and neutron scientists took place in an afternoon panel discussion chaired by Chuang Zhang (Institute of High Energy Physics, CAS) and Ji Feng



Workshop attendees celebrated the approval of BSNS by the Chinese government.

(IoP). Various issues concerning the present and future user policy, means of communication (including the distribution of a questionnaire), the organization of neutron schools, synergetic interaction with the synchrotron x-ray user community, etc., were raised. It was

decided, among other things, that next year's workshop will be expanded to include topical parallel sessions and poster contributions from users.

JIE ZHANG
Bureau of Basic Sciences, CAS

FANGWEI WANG
AND SHAOYING ZHANG
IoP, CAS

CHUN LOONG
IPNS, ANL

Students Fill Summer Days with Intensive X-ray and Neutron School

Each year as many as 200 students in Ph.D. programs compete to attend Argonne's National School on Neutron and X-ray Scattering. For the talented 60 selected to attend the Argonne school each August, it means two weeks of 10–12 hours a day, six days a week.

The school is in its seventh year. Argonne is the only national laboratory with both types of facilities: the Intense Pulsed Neutron Source (IPNS) for neutron scattering and

the Advanced Photon Source (APS) for X-ray scattering.

"The school's philosophy is to provide young scientists studying for their Ph.D. with a general background in available neutron and X-ray techniques," said Dean Haeffner, a physicist and group leader in the Experimental Facilities Division of the APS. Haeffner and physicist Raymond Osborn of the Materials Science Division organized the school this year.

The National School on Neutron and X-Ray Scattering brings the field's top scientists from academia, industry, and national laboratories together with the brightest young scientists attending U.S. universities. Students attended lectures in the morning and afternoon to establish a basic understanding of a broad range of techniques. Afternoon and evenings were devoted to hands-on experiments and analysis.